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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,261	10/18/2006	Chang-Hoi Koo	678-2289	3135

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EXAMINER	
SABOURI, MAZDA	
ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/554,261	KOO ET AL.	
	Examiner	Art Unit	
	MAZDA SABOURI	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5 and 14-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5,14-21 and 38-42* is/are rejected.

7)☒ Claim(s) *22-37* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/20/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of 5 and 14-42 in the reply filed on 11/6/2009 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 18-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 18 recites the subscriber station correcting channel assignment information related to a received common access channel and assignment information of at least two backoff domains on at least one common access channel prior to performing access requesting.

The specification does not appear to teach the subscriber station doing correcting of this sort or correcting of information in general.

Claims 19-21 depends on claim 18.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 14, 15 and 39-42** rejected under 35 U.S.C. 102(b) as being anticipated by US 2004/0174845 (Koo1 et al.).

As to claim 14, Koo1 teaches a handover method for requesting ranging when a subscriber station enters a network for handover in a mobile communication system, the method comprising the steps of:

- Upon receiving the request, transmitting by a base station backoff start information and backoff end information for handover (*when a SS detects a better BS for handover, that BS sends UCD message having a backoff start/end defining a backoff window. See paragraphs 17 and 65-69)*;
- Determining a backoff value for handover according to the backoff start and end information by a subscriber station that received the backoff start and end information (*if ranging is initially unsuccessful a backoff value derived from the backoff window is used to retry ranging. See paragraphs 17 and 65-69*).

As to claim 39, Koo1 teaches 39. A handover apparatus for providing an access service on a common access channel in a mobile communication system, the apparatus comprising:

- A subscriber station that requests ranging as it enters a network for handover (*SS requests ranging with new BS. See paragraphs 65-69*);
- A base station that transmits handover information to the subscriber station (*New BS sends DL_MAP, UL_MAP and UCD message to SS. See paragraphs 65-69*);
- Wherein when the subscriber station requests ranging as it enters the network for handover, the subscriber station receives backoff start information and backoff end information from the base station and determines a backoff value for handover according to the received backoff start information and backoff end information (*when a SS detects a better BS for handover, that BS sends UCD message having a backoff start/end defining a backoff window from which a backoff value can be derived.. See paragraphs 17 and 65-69*).

As to claim 15, Koo1 further teaches the step of re-requesting ranging after waiting for a predetermined backoff value, if ranging fails when the subscriber station enters a network for handover (*if ranging is initially unsuccessful a backoff value derived from the backoff window defined in the UCD message is used to retry ranging. See paragraphs 17 and 65-69)*.

As to claim 40, Koo1 further teaches the subscriber station re- requests ranging to the base station after waiting for the determined backoff value when the ranging fails (*if ranging is initially unsuccessful a backoff value derived from the backoff window defined in the UCD message is used to retry ranging. See paragraphs 17 and 65-69).*

As to claim 41, Koo1 further teaches wherein the backoff start information is formed with an initial backoff window size for performing initial ranging of the subscriber station for a handover processing time (*see paragraph 17*).

As to claim 42, Koo1 further teaches wherein the backoff end information is formed with a final backoff window size for performing initial ranging of the subscriber station (*see paragraph 17*).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a

later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claims 5, 16, 17 and 38** rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0174845 (*Koo et al., herein referred to as Koo1*).in view of US 2003/0198179 (*Koo et al., herein referred to as Koo2*).

As to claim 5, Koo1 teaches a method for performing handover for an access service on a common access channel in a mobile communication system using a broadband wireless access scheme, the method comprising the steps of:

- Receiving a backoff domain having a backoff start point and a backoff end point for each of subscriber stations, when handover between a base station and the subscriber stations is performed (*UCD message is sent prior to handover. The UCD message has a backoff start/end defining a backoff window. See paragraphs 17 and 65-69*);
- And determining a backoff value corresponding to the backoff domain, and re-requesting ranging after waiting for the determined backoff value (*if ranging is initially unsuccessful a backoff value derived from the backoff window is used to retry ranging. See paragraphs 17 and 65-69*).

What is lacking is the reception of multiple backoff domains such that the received backoff domains are checked, and a backoff domain is selected for handover among the backoff domains.

In a similar field of endeavor, Koo2 teaches that UCD messages such as those taught by can comprise multiple backoff domains for multiple types of ranging which can be selected by the subscriber station (*see Koo2, paragraphs 36 and 37. Note that Koo1 teaches these different types of ranging as well in paragraphs 22-24*).

Motivation for using the teachings of Koo2 is found in Koo2. Koo2 teaches that having different backoff domains for different types of ranging can reduce delay times and improve system performances (*see Koo2, paragraphs 17 and 18*). It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Koo2 into those of Koo1 for the reasons mentioned above.

As to claim 16, Koo 1 teaches 16. A method for performing handover on a common access channel in a mobile communication system, the method comprising the steps of:

- Broadcasting, by a base station, information to cells over a forward common control channel periodically or an on-demand basis (*DL_MAP, UL_MAP and UCD sent from BS to SS over downlink control channel for purposes such as ranging. These messages can be sent periodically or on demands. see paragraphs 22-24 and 65-69*);
- wherein the broadcasting step comprises the steps of:
  - broadcasting channel assignment information for an access channel corresponding to the common access channel to the

cells periodically or an on-demand basis (*DL_MAP, UL_MAP and UCD sent from BS to SS over downlink control channel for purposes such as ranging and channel assignment. These messages can be sent periodically or on demands. see paragraphs 11-17, 22-24 and 65-69*);

- and broadcasting separation information of a backoff domain in at least one common access channel to the cells periodically or an on-demand basis (*UCD message is sent prior to handover. The UCD message has a backoff start/end defining a backoff window. See paragraphs 17 and 65-69).*

What is lacking is the reception of multiple backoff domains such that the received backoff domains are checked, and a backoff domain is selected for handover among the backoff domains.

In a similar field of endeavor, Koo2 teaches that UCD messages such as those taught by can comprise multiple backoff domains for multiple types of ranging which can be selected by the subscriber station (*see Koo2, paragraphs 36 and 37. Note that Koo1 teaches these different types of ranging as well in paragraphs 22-24*).

Motivation for using the teachings of Koo2 is found in Koo2. Koo2 teaches that having different backoff domains for different types of ranging can reduce delay times and improve system performances (*see Koo2, paragraphs 17 and 18*). It would have been obvious to one of ordinary skill in the arts at the time

the invention was made to combine the teachings of Koo2 into those of Koo1 for the reasons mentioned above.

As to claim 17, Koo1 further teaches wherein the broadcasting step comprises the steps of: receiving an access request message (*ranging request message*) of the subscriber station; determining whether the base station is a system capable of providing a corresponding access service for the subscriber station; and transmitting an access request response (*ranging response message*) message including a connection identifier (CID) authenticated by a system that transmits the access request from the subscriber station (*access probe sent to second base station, base station sends response having CID, see paragraphs 67, 68 and 73-75*).

As to claim 38, Koo1 further teaches wherein if the subscriber station initializes an access request after receiving assignment information of the common access channel and separation information of at least two backoff domains for at least one common access channel, the subscriber station randomly selects a backoff value in a backoff domain corresponding to a backoff algorithm for determining a time for re-initializing an access request in the selected common access channel (*Truncated Binary Exponential Backoff Algorithm, see paragraph 17. Note that Koo2 already teaches multiple backoff windows*).

Allowable Subject Matter

Claims 18-37 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claims 18-21, the USC 112 rejection would need to be overcome before these claims could be placed in condition for allowance.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2004/0185852 (Son et al.) teaches a system and method for implementing handoff in a traffic state in a BAW system. US 2004/0176094 (Kim et al.) teaches a system and method for determining handover in a BAW system. US 2004/0185853 (Kim et al.) teaches a system and method for performing handover in a BAW system. US 6400695 (Chuah et al.) teaches methods and apparatus for retransmission based access priority in a communication system. US 2003/0125046 (Riley et al.) teaches use of mobile stations for determination of base station location parameters. US 2003/0108126 (Akopian) teaches a method and apparatus for acquiring a ranging signal of a positioning system. US 2002/0049057 (Mousley et al.) teaches a secondary station and method of operating the station.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAZDA SABOURI whose telephone number is (571)272-8892. The examiner can normally be reached on Monday-Friday from 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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